

**African Tingidae, XXXI:
Lacebugs in the Natal Museum (Heteroptera)**

by

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SYNOPSIS

This article deals with a collection of Tingidae in the Natal Museum (Pietermaritzburg); three new species are described; new data are given for thirty-three other species.

The present paper deals with a very interesting collection in the Natal Museum (Pietermaritzburg). Thirty-six species are represented there, three of which are here described as new, *Ammianus natalensis* from South Africa, *Ammianus stuckenbergi* from Madagascar, and *Cochlochila londti* from Malawi. In addition two species are reported for the first time from Botswana, six from Malawi, and two from South Africa.

TINGIDAE IN NATAL MUSEUM

Cantacader afzelii Stål

Cantacader afzelii Stål, 1873: 116.

SOUTH AFRICA: *Natal:* Pietermaritzburg, Montrose, in garden, 14.ii.1980, 2930CB, J. G. H. Londt, in light, 1 ex.

Previously known in South Africa only from the Cape Province.

Cantacader letabanus Rodrigues

Cantacader letabanus Rodrigues, in press *b*, figs 1a and b.

SOUTH AFRICA: *Natal:* Ukulinga Res. Farm, 10 km S.E. Pietermaritzburg, 10.vii.1978, grassland, N. Huleatt-James, 1 ex.

Previously known only from the Transvaal.

Astolphos capitatus Distant

Astolphos capitatus Distant, 1904: 429, pl. 8, fig. 5.

SOUTH AFRICA: *Natal:* Pietermaritzburg, i.1961, B. Stuckenberg, 1 ex.

Known only from South Africa, where it was reported from the Cape Province.

Plesionoma capeneri Rodrigues

Plesionoma capeneri Rodrigues, in press *b*, fig. 1d.

SOUTH AFRICA: *Natal:* Town Bush, Pietermaritzburg, v.1980, R. M. Miller, malaise trap, 1 ex.

Previously known only from the Cape Province.

Aconchus urbanus (Horváth)

Galeatus (Aconchus) urbanus Horváth, 1905: 565.

SOUTH AFRICA: *Cape Province*: S.W. Cape, 7 km S. Swellendam, Bontebok National Park, 3420AB, iii.1979, L. Braack, malaise trap, nr. river, 1 ex.

Reported before from South Africa but without indication of the collecting site.

Habrochila clivosa Drake

Habrochila clivosa Drake, 1954: 11.

SOUTH AFRICA: *Natal*: Umkomaas, 3030BB, 21.vi.1980, coastal dune bush, R. M. Miller, 1 ex.

Known in South Africa from the Cape Province, Natal and Transvaal.

Habrochila natalana Drake

Habrochila natalana Drake, 1956: 426.

SOUTH AFRICA: *Natal*: Ashburton, 2.xi.1979, R. M. Miller, 1 ex.; 1,5 km E. Mtunzini, Umlalazi Nature Res., 2831DD, 28–29.iii.1980, R. Miller, dunes, malaise trap, 1 ex.

Known in South Africa from Natal and Transvaal.

Habrochila africana Drake

Habrochila africana Drake, 1948: 153.

SOUTH AFRICA: *Natal*: Ashburton, 15 km S.E. Pietermaritzburg, ii.1977, J. G. H. Londt, malaise trap in grassland, 7 ex.

Known in South Africa from Natal and Transvaal.

Bako lebruni Schouteden

Bako lebruni Schouteden, 1923: 91.

BOTSWANA: Xugana, Isl. 19°04'S, 23°03'E, 20–26.xi.1979, B. Lamoral, 2 ex.

Previously known from Mozambique, Nigeria and Zaïre. Here reported for the first time from Botswana.

Pontanus cafer (Distant)

Phyllontocheila cafer Distant, 1902: 241, pl. 15, fig. 17.

SOUTH AFRICA: *Cape Province*: Grahamstown, 13.xi.1971, J. G. H. Londt, 1 ex.

Known heretofore only from the Cape Province.

Pogonostyla afra Drake & Smithers

Pogonostyla afra Drake & Smithers, 1958: 315.

SOUTH AFRICA: *Natal*: Town Bush, Pietermaritzburg, B. & P. Stuckenberg, 1 ex.

Known heretofore only from Natal.

Ammianus alaticollis (Stål)

Phyllontocheila alaticollis Stål, 1855: 37.

SOUTH AFRICA: *Natal*: Ndumu Reserve, Ingwavuma district, Tongaland, 1–10.xii.1963, B. & P. Stuckenberg, 2 ex.

Known in South Africa from Natal and Transvaal.

Ammianus junodi (Distant)

Phyllontochila junodi Distant, 1904: 431, pl. 8, fig. 10.

SOUTH AFRICA: *Natal:* Ndumu Reserve, Ingwavuma district, Tongaland, 1–10.xii.1963, B. & P. Stuckenberg, 1 ex.; Oribi Gorge Reserve, Umzimkulwana Valley, 21–28.xi.1960, B. & P. Stuckenberg, 1 ex.; Town Bush, Pietermaritzburg, 18.xii.1961, B. & P. Stuckenberg, 1 ex.; Ukulinga Res. Farm, 10 km S.E. Pietermaritzburg, 21.iii.1978, N. Huleatt-James, grassland, 1 ex.; *Transvaal:* near Derby, 3.ii.1978, J. G. H. Londt, open grassveld area, 1 ex.

Known in South Africa from the Cape Province, Natal and Transvaal.

Ammianus usambarensis Rodrigues

Ammianus usambarensis Rodrigues, in press d: fig. 2.

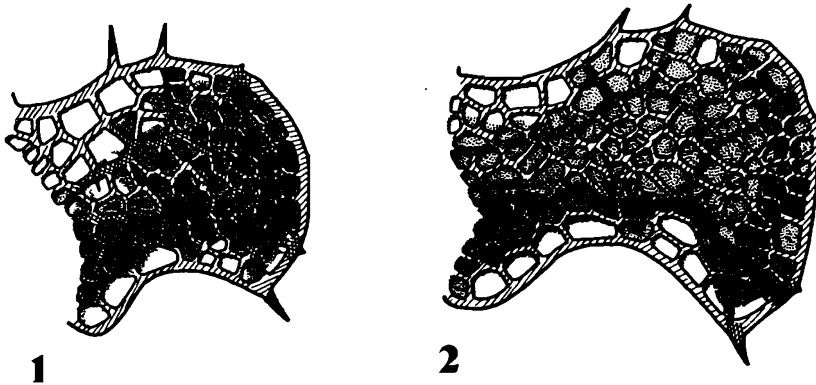
MALAWI: Chimaliro Forest Reserve, 1 200 m, 1233BC, Stuckenberg & Londt, 9.xii.1980, *Brachystegia* woodland, 1 ex.

Described from Tanzania. Reported for the first time from Malawi.

Ammianus natalensis sp. n. (Fig. 1)

Head: Blackish brown, covered with a white exudation, armed with five very long, slender, testaceous spines, with apex darker; eyes blackish; bucculae brownish testaceous, areolate, closed in front; rostrum testaceous with blackish brown apex, extending beyond middle of metasternum; rostral laminae testaceous, high, uniseriate, open behind; antenniferous processes brownish with testaceous apex, pointed; antennae with segments I and II brown, other segments missing.

Pronotum: Brown, broad, convex, punctate, with long and fine hairs, tricarinate, the carinae low, uniseriate, beset with long fine hairs, lateral carinae terminating anteriorly a little behind the level of posterior apex of hood, not reaching to calli; hood testaceous, moderately large, inflated, compressed laterally, feebly produced in front, with a long spine on crest; pronotal membranes (Fig. 1) very large, broadly expanded laterally, moderately reflexed, clothed on both sides with long and fine hairs, present also on outer margins, with median width greater than basal length (84:78), armed with 2 moderately long spines on front margin, then



Figs 1–2. *Ammianus* species, right pronotal membrane. 1. *A. natalensis* sp. n.
2. *A. stuckenbergi* sp. n.

almost regularly rounded, with some very small spines on lateral margin, postero-lateral corner with a moderately long spine, posterior margin concave and unarmed, dark brown with some clear areolae on posterior margin and most areolae on antero-basal corner also clear; posterior process brown, areolate. Orifice visible.

Hemelytra: Widest across premedian band, very slightly concave between premedian and apical bands, with 2 or 3 moderately long spines on basal part and some other smaller spines on lateral margins, clothed on both dorsal and ventral surfaces with long and fine hairs, present also on outer margin; costal area with 2 transverse brown bands, as well as other areolae between them, broad, in its widest part almost two-thirds as broad as hemelytra; subcostal area brownish, 4 or 5 areolae deep; discoidal area long, acutely angulate at both base and apex, 4 or 5 areolae deep in widest part; sutural area with large areolae; hypocostal laminae biseriate at base, uniseriate apically. Metathoracic wings fuscous, slightly longer than abdomen.

Body: Brown beneath. Legs brownish testaceous with apex of tarsi dark brown.

Measurements: Total length—4,48 mm; maximum width (hemelytra)—2,85 mm.

Material examined: Holotype ♀, SOUTH AFRICA: *Natal*: 1,5 km N. Lidgetton, 2930AC, 11.xi.1979, R. M. Miller. NM-2555.

This new species belongs to the *mayri*-group of species by the shape of the pronotal membranes; it is distinguished from the other species of the group, except the new species described below, by its much smaller size; it differs from *Ammianus stuckenbergi* sp. n. by the much narrower pronotal membranes.

***Ammianus stuckenbergi* sp. n. (Fig. 2)**

Head: Blackish, covered with a white exudation, armed with 5 moderately long, slender, testaceous spines, with apex darker; eyes blackish; bucculae brownish testaceous with margins lighter, areolate, closed in front; rostrum testaceous with blackish brown apex, extending beyond the middle of metasternum; rostral laminae testaceous, uniseriate, open behind; antenniferous processes brownish with lighter apex; antennae brownish testaceous with segments I and II darker, clothed with long hairs; segmental measurements: I, 0,288 mm; II, 0,180 mm; III, 1,620–1,680 mm; IV, 0,492–0,516 mm.

Pronotum: Brown, broad, convex, punctate, with long and fine hairs, tricarinate, the carinae low, uniseriate, the areolae very small, beset with long and fine hairs, lateral carinae parallel, terminating anteriorly a little behind the level of posterior apex of hood, not reaching to calli; hood testaceous, moderately large, inflated, compressed laterally, feebly produced in front, with a long spine on crest; pronotal membranes (Fig. 2) very large, broadly expanded laterally, sloping obliquely upwardly, clothed on both sides with long and fine hairs, with small bristle-like hairs on outer margins, with median width greater than basal length (118–83), armed with 2 moderately long spines on front margin, then irregularly rounded, postero-lateral corner with a moderately long spine, posterior margin concave and unarmed, dark brown with some clear areolae on posterior margin

and most of the areolae on antero-basal corner also clear; posterior process brown, areolate. Orifice visible.

Hemelytra: Widest across premedian band, concave between premedian and apical bands, with 3 small spines on basal part of lateral margin, clothed on both sides with long and fine hairs, outer margin with bristle-like hairs; costal area with 2 transverse brown bands as well as other areolae between them, broad, in its widest part almost three-fifths as broad as hemelytra; subcostal area brownish, 3 or 4 areolae deep; discoidal area long, acutely angulate at both base and apex, 4 areolae deep in widest part; sutural area with large areolae; hypocostal laminae biseriate. Metathoracic wings fuscous, slightly longer than abdomen.

Body: Brown beneath. Legs brownish testaceous with apex of tarsi darker.

Measurements: Total length—4,73–4,79 mm; maximum width (hemelytra)—3,01–3,07 mm.

Material examined: Holotype ♂ and 1 paratype, MADAGASCAR: Joffreville Diégo-Suarez, Madagascar Nord, 4.xii.1957, 'prairie de lisières', 840 m, B. Stuckenberg. Holotype and paratype in the Natal Museum (NM-2556).

This new species belongs also to the *mayri*-group of species; it differs from the other species of the group, except *Ammianus natalensis* sp. n., by its smaller size; and from *A. natalensis* by the broader pronotal membranes (118–84).

Sinuessa nairobi Drake

Sinuessa nairobi Drake, 1957: 34.

MALAWI: Chimaliro Forest Reserve, 1 200 m, 1233BC, Stuckenberg & Londt, 9.xii.1980, *Brachystegia* woodland, 1 ex.

Previously known from Kenya, South Africa and Zaïre. It is for the first time recorded from Malawi.

Sinuessa subinermis (Horváth)

Phyllotochila (*Sinuessa*) *subinermis* Horváth, 1910: 64.

SOUTH AFRICA: *Transvaal*: Ofcolaco, 2430AB, 21–26.ii.1980, J. Londt, Bushveld, malaise trap, 1 ex.

Known in South Africa only from the Transvaal.

Lasiacantha absimilis Drake

Lasiacantha absimilis Drake, 1951: 177.

MALAWI: Mulange Mountain, Likabula River Valley, 1 000 m, 1535DC, 28–30.xi.1980, Stuckenberg & Londt, Riverine *Brachystegia* woodland, 1 ex. SOUTH AFRICA: *Natal*: Umhlanga Bush near Durban, ii.1963, B. & P. Stuckenberg, coastal forest, 1 ex.

Previously known from Ethiopia, Gambia, Niger, Sudan and Tanzania. Recorded for the first time from Malawi and South Africa.

Paracopium glabricorne (Montandon)

Eurycera glabricorne Montandon, 1892: 267.

SOUTH AFRICA: *Natal*: Ndumu Reserve, Ingwavuma district, Tongaland, 1–10.xii.1963, B. & P. Stuckenberg, 1 ex.; Ukulinga Res. Farm, 10 km S.E. Pietermaritzburg, 20.ii.1978, N. Huleatt-James, grassland, 1 ex.

Known in South Africa from the Cape Province, Natal, Orange Free State and Transvaal.

Kapiriella natalana Drake

Kapiriella natalana Drake, 1956: 423.

SOUTH AFRICA: *Natal*: Insizwa Mt., Mount Ayliff distr., Griqualand East, xi.1961, B. & P. Stuckenberg, 6 ex.; Giant's Castle Res., Drakensberg, 5 800 ft., 18–23.ix.1961, B. & P. Stuckenberg, 12 ex.; near Lilani, Ahrens dist., iv.1962, B. & P. Stuckenberg, 1 ex.

Previously known only from Natal.

Haedus clypeatus Distant

Haedus clypeatus Distant, 1904: 432, pl. 8, fig. 12.

SOUTH AFRICA: *Natal*: Ukulinga Res. Farm, 10 km S.E. Pietermaritzburg, 28.xi.1978, N. Huleatt-James, grassland, 2 ex.

Previously known only from the Cape Province.

Cysteochila bredoi Schouteden

Cysteochila bredoi Schouteden, 1953a: 117.

BOTSWANA: Xugana, 19°04'S 23°03'E, 18–25.xi.1980, B. Lamoral, woodland, malaise trap, 1 ex.

Previously known only from Zaïre. Reported for the first time from Botswana.

Cysteochila austroafricana Rodrigues

Cysteochila austroafricana Rodrigues, in press a: figs 7a and b.

SOUTH AFRICA: *Natal*: Cathedral Peak area, 2829CC, 4–11.iv.1977, J. G. H. Londt, ex malaise trap, hotel area, 4 100 m, 1 ex.

Known heretofore only from South Africa, where it was reported from the Cape Province and Natal.

Cysteochila impressa Horváth

Cysteochila impressa Horváth, 1910: 66.

MALAWI: Mulanje Mnt., Likabula River Valley, 1 000 m, 1530DC, 28–30.xi.1980, Stuckenberg & Londt, Riverine *Brachystegia* woodland, 2 ex.

Widely distributed. Recorded for the first time from Malawi.

Compseuta ornatella (Stål)

Tripidocheila ornatella Stål, 1855: 37.

SOUTH AFRICA: *Natal*: near Lilani, Ahrens dist., iv.1962, B. & P. Stuckenberg, 2 ex.

Known in South Africa from Natal and Transvaal.

Dictyla flavipes (Signoret)*Monanthia flavipes* Signoret, 1861: 956.

TRANSKEI: Port St Johns, 20–25.xi.1961, B. & P. Stuckenberg, 1 ex.
Known in South Africa from the Cape Province and Natal.

Dictyla tuberosa (Horváth)*Monanthia tuberosa* Horváth, 1929: 324.

SOUTH AFRICA: *Transvaal*: 10 km S.E. Potgietersrus on road to Zebediela,
2429AC, 24–27.i.1978, J. G. H. Londt, Bushveld, malaise trap, 1 ex.
Known in South Africa from Natal and Transvaal.

Naochila parvella (Drake)*Cochlochila parvella* Drake, 1954: 7.

SOUTH AFRICA: *Natal*: Ashburton, 15 km S.E. Pietermaritzburg, ii.1977,
J. G. H. Londt, malaise trap in grassland, 2 ex.
Known in South Africa from the Cape Province, Natal and Transvaal.

Cochlochila (s. str.) *austroafricana* Rodrigues*Cochlochila* (C.) *austroafricana* Rodrigues, in press e: fig. 34.

SOUTH AFRICA: *Cape Province*: Kommetjie, Hillside, 3418AB, 12.ix.1981,
J. Londt, L. Schoeman & B. Stuckenberg, macchia vegetation, 1 ex.
Known in South Africa only from the Cape Province.

Cochlochila (s. str.) *bullita* (Stål)*Monanthia* (*Cochlochila*) *bullita* Stål, 1873: 133.

SOUTH AFRICA: *Natal*: Ashburton, 15 km S.E. Pietermaritzburg, ii.1977,
J. G. H. Londt, malaise trap in grassland, 1 ex.; Pietermaritzburg, 28.i.1980,
R. M. Miller, thyme herb, 14 ex. and 6 Vth instar nymphs. MALAWI: 35 km
S.E. Monkey Bay on road to Mangochi, 1434AA, 500 m, 12.xii.1980, Londt &
Stuckenberg, mixed woodland, 1 ex.

Known in South Africa from the Cape Province, Natal, Orange Free State and
Transvaal. Widely distributed in East Africa from Sudan and Eritrea to South
Africa; recorded for the first time from Malawi.

Cochlochila (*Kibongoto*) *capeneri* Drake & Slater.*Cochlochila capeneri* Drake & Slater, 1955: 49.

SOUTH AFRICA: *Natal*: Ukulinga Res. Farm, 10 km S.E. Pietermaritzburg,
20.ii.1978, N. Huleatt-James, grassland, 8 ex.; Ukulinga Res. Farm, 10 km S.E.
Pietermaritzburg, 24.iv.1978, N. Huleatt-James, grassland, 2 ex.

Known in South Africa from the Cape Province, Natal and Transvaal.

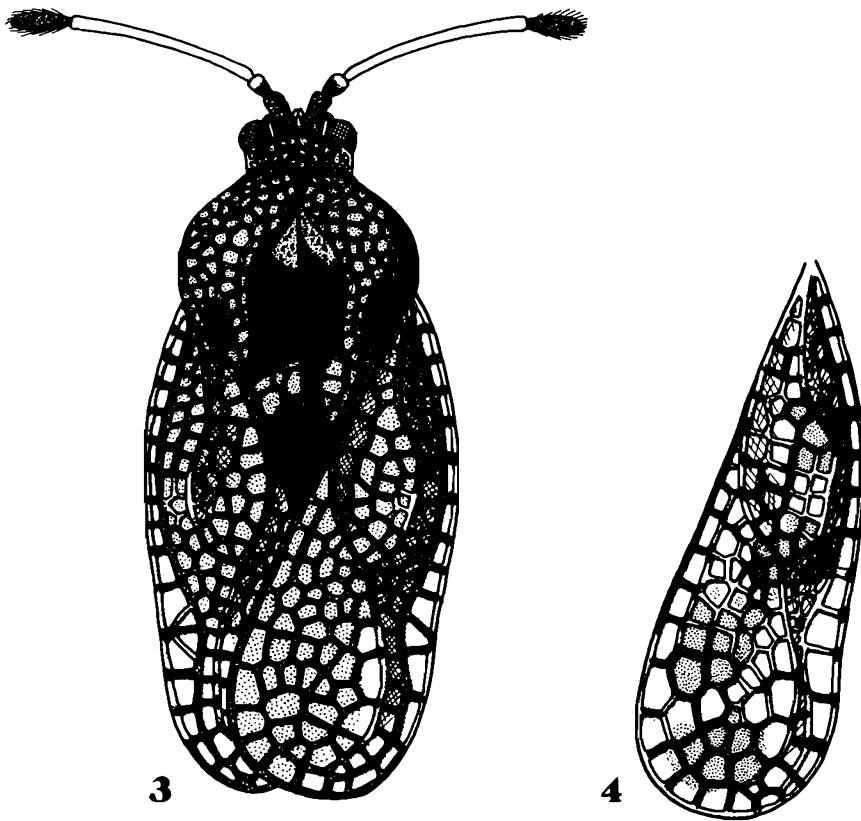
Cochlochila (*Kibongoto*) *londti* sp. n. (Figs 3–4)

Variable in colour from mainly black to mainly testaceous.

Head: Black, armed above with five testaceous spines, posterior pair reaching the
level of anterior margin of eyes, appressed, median spine small, porrect, anterior
pair directed forward; eyes blackish; bucculae black, areolate, closed in front;

rostrum blackish brown, reaching to posterior margin of mesosternum; rostral laminae blackish with margins testaceous, high, uniseriate, subparallel on mesosternum, wider on metasternum; antenniferous processes blackish; antennae with segment I blackish brown, segment II blackish brown with apex dark testaceous, segment III testaceous, segment IV black, long, slender, indistinctly pilose except segment IV; segmental measurements: I, 0,120 mm; II, 0,120 mm; III, 0,839 mm (0,780–0,900 mm); IV, 0,230 mm (0,216–0,240 mm).

Pronotum: Black, punctate, tricarinate; median carina, raised, uniseriate, lower and without areolae on posterior process, lateral carinae concealed on disc by the reflexed pronotal membranes, terminating just in front of middle of pronotal disc; collar blackish brown or with antero-lateral margins testaceous, areolate, very slightly raised at middle; pronotal membranes entirely blackish or mainly testaceous with some veinlets blackish brown, large, reflexed, conchate, with anterior part in contact with median carina, spread apart and open posteriorly, outer margin in contact with dorsal edge of lateral carinae; posterior process areolate. Orifice indistinct.



Figs 3–4. *Cochlochila londti* sp. n. 3. General aspect of the holotype. 4. Right hemelytra of a lighter paratype.

Hemelytra: Wider and longer than abdomen, almost entirely blackish or mainly testaceous with some veinlets blackish brown (Fig. 4); costal area moderately wide, uniseriate or with one or two extra areolae in widest part; subcostal area mostly biseriate, three areolae deep opposite apex of discoidal area; the latter reaching beyond middle of hemelytra, sharply angular at base, widened posteriorly, with outer boundary vein gradually raised apically on basal two-fifths, then deeply concavely projecting into subcostal area with boundary vein there concavely depressed, and then raised in a second tumid elevation, 4 or 5 areolae deep in widest part; sutural area large with some areolae clouded with fuscous, areolae larger apically; hypocostal laminae uniseriate. Metathoracic wings fuscous, almost as long as hemelytra.

Body: Black beneath. Legs slender, femora blackish with lighter apex, tibiae testaceous with darker base, tarsi blackish.

Measurements: Total length: 2,97 mm (2,82–3,10 mm) ♂ or 3,23 mm (3,16–3,34 mm) ♀; maximum width (hemelytra): 1,30 mm (1,26–1,35 mm) ♂ or 1,46 mm (1,41–1,50 mm) ♀.

Material examined: Holotype (♂), allotype (♀) and 8 paratypes, MALAWI, Ntchisi Forest Reserve, 1334AC, 1 500 m, 3–4.xii.1980, Londt & Stuckenberg, montane forest and woodland. Holotype and allotype in the Natal Museum (NM-2557); paratypes in this Museum and in the author's collection.

This new species belongs to the group of species of the subgenus *Cochlochila* (*Kibongoto*) with low pronotal membranes, only slightly inflated; it differs from the other species of the group, except *Cochlochila* (*Kibongoto*) *aemula* Drake, by the blackish brown or blackish first two segments of the antennae and the femora; from *Cochlochila* (*Kibongoto*) *aemula* by its shorter length, the outer margin of the pronotal membranes not touching the dorsal surface of the pronotal disc and by the narrower costal area of the hemelytra.

Agramma leleupi (Schouteden)

Serenthia leleupi Schouteden, 1953b: 116.

MALAWI: Ntchisi Forest Reserve, 1334AC, 1 500 m, 3–4.xii.1980, Londt & Stuckenberg, montane forest and woodland, 1 ex.

This species was known only from Zaïre. New to the fauna of Malawi.

Agramma namaachense Rodrigues

Agramma namaachense Rodrigues, in press c: fig. 2 c.

SOUTH AFRICA: Natal: Ukulinga Res. Farm, 10 km S.E. Pietermaritzburg, 28.xi.1978, N. Huleatt-James, grassland, 7 ex.

Described from Mozambique. It is the first record from South Africa.

Agramma dilectulum (Drake)

Serenthia dilectula Drake, 1951: 168.

SOUTH AFRICA: Natal: Ndumu Reserve, Ingwavuma district, Tongaland, 1–10.xii.1963, B. & P. Stuckenberg, 2 ex.

Previously known in South Africa only from the Cape Province.

ACKNOWLEDGEMENTS

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REFERENCES

- DISTANT, W. L. 1902. XII. Rhynchotal miscellanea. *Annals of the South African Museum* 2 (9): 237–254.
- 1904. On the South African Tingitidae and other heteropterous Rhynchota. *Transactions of the South African Philosophical Society* 14 (5): 425–436.
- DRAKE, C. J. 1948. New genera and species of Tingidae (Hemiptera). *Proceedings of the Biological Society of Washington* 61: 149–156.
- 1951. New genera and species of Tingidae (Hemiptera) in the Hungarian National Museum. *Annales Historico-Naturales Musei Nationalis Hungarici* 1 (1): 165–178.
- 1954. A miscellany of new Tingidae (Hemiptera). *Proceedings of the Biological Society of Washington* 67: 1–15.
- 1956. Hemiptera Heteroptera Tingidae and Saldidae. *South African Animal Life* 3: 421–433.
- 1957. The genus *Belenus* Distant and its allies (Hemiptera: Tingidae). *Quarterly Journal of the Taiwan Museum* 10 (1): 31–35.
- DRAKE, C. J. & SLATER, J. A. 1955. A new genus and four new species of African Tingidae (Hemiptera). *Acta Entomologica Musei Nationalis Pragae* 30 (443): 49–53.
- DRAKE, C. J. & SMITHERS, C. N. 1958. Two new species of *Pogonostyla* (Hemiptera: Tingidae). *Revue de Zoologie et Botanique Africaines* 57 (3–4): 313–316.
- DUARTE RODRIGUES, P. in press a. African Tingidae, XXI: Lacebugs in the British Museum (Natural History) (Heteroptera). *Arquivos do Museu Bocage*, ser. C, 1 (5).
- in press b. African Tingidae, XXII: Lacebugs in the Plant Protection Research Institute (Pretoria) (Heteroptera). *Arquivos do Museu Bocage*, ser. C, 1 (6).
- in press c. African Tingidae, XXV: A new *Cantacader*, three new *Agramma* and new data (Heteroptera). *Arquivos do Museu Bocage*.
- in press d. African Tingidae, XXVI: Lacebugs in the Zoological Museum of the Humboldt-University of Berlin (Heteroptera). *Deutsche Entomologische Zeitschrift*.
- in press e. African Tingidae, XXVII: On the genus *Cochlochila* Stål, with the description of a new subgenus and nine new species (Heteroptera). *Journal of the Entomological Society of Southern Africa*.
- HORVÁTH, G. 1905. Tingitidae novae vel minus cognitae e regione Palaeartica. *Annales Musei Nationalis Hungarici* 3: 556–572.
- 1910. Hemiptera: Tingitidae und Aradidae. Wissenschaftliche ergebnisse der Schwedischen Zoologischen Expedition nach dem Kilimandjaro, dem Meru und den Umgebenden Massaiesteppen Deutsch-Ostafrikas 1905–1906: 61–72.
- MONTANDON, A. L. 1892. Hémiptères-hétéroptères nouveaux. *Revue d'Entomologie* 11: 265–273.
- SCHOUTEDEN, H. 1953a. Espèces nouvelles du genre *Cysteocheila* (Hem. Tingitidae). *Revue de Zoologie et Botanique Africaines* 48 (1–2): 115–123.
- 1953b. Tingides congolais nouveaux. *Revue de Zoologie et Botanique Africaines* 48 (3–4): 165–171.
- SIGNORET, V. 1861. Faune des hémiptères de Madagascar, part 2, hétéroptères. *Annales de la Société Entomologique de France*, ser. 3, 8: 917–972.
- STÅL, C. 1855. Hemiptera fran Kafferlandet. *Öfv. Kongliga Vetenskaps-Akademiens Förh.* 12 (1): 27–46.
- 1873. Enumeratio Hemipterorum, vol. 3. *Kongliga Svenska Vetenskaps-Akademiens Handlingar* 11 (2): 1–163.

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